

Part I:

The IM System & Fire Services

Another Tool for Mutual Aid

Montana's fire services didn't always embrace the concept of mutual aid. But the advent of Montana's "color channel" system of assigning specific radio frequencies to specific public safety incidents and responders has proven immensely successful. Today, fire fighters are among the



staunchest advocates of the mutual aid system and are justifiably proud of how they use it.

IM does not promote its system as a replacement for the existing mutual aid system. Instead, IM is another tool in the toolbox. Fire fighters have told us they are always happy to have "one more tool" (such as a hammer or an axe) that can do things existing tools can't.

Will you use the IM system regularly? Maybe not. But as fire agencies and other public safety and emergency service responders have learned in Lewis and Clark County in the years since its trunked system

went active, this new technology can provide another means to communicate. And as IM leaders have heard over and over again in local meetings, communication is what's important.

Trunking is Working in Montana Right Now.

Contrary to the statements of trunking opponents, trunking technology is working for rural volunteer fire departments in Lewis & Clark County. Bob Drake of the Tri-Lakes VFD east of Helena says, "We've never had it so good." Dave Mason of the Baxendale district west of Helena describes his district's current radio coverage as 100%, "as compared to about 60% with the old system."

In Hill County, where the IM trunking system now has been "accepted" officially, a variety of public safety providers already has been using trunked radios in "test mode." Among them is the Wild Horse Volunteer Fire Department in the north-central part of the county.

In October 2009, Wild Horse volunteers battled a grass fire that crossed into other districts and the Canadian border. According to Wild Horse VFD Chief Joe Pruys, his fire fighters used the IM trunked system (still officially in "test" mode at the time) to communicate with other Hill County fire departments as the fire moved across the landscape.

(By contrast, Wild Horse volunteers could not talk with their Canadian counterparts who are not on a similar system. IM hopes to create a solution to that situation by working with state, provincial and national government leaders.)



Not Everyone Needs A Trunked Radio—or Digital.

This has been a consistent part of IM's message as its leaders have traveled around the state for "outreach and sustainability" meetings. It also has been echoed by local community and

emergency service leaders in those meetings

In taking this view, IM recognizes that Montana fire departments and districts are concerned over the potential expense of providing a high-tech radio to a large number of volunteer fire fighters. We have heard worries about fire fighters losing or damaging expensive radios.

IM's advice to the fire community is to have a limited number of trunked radios. Each should be a mobile (vehicle) radio assigned to a chief or another top supervisor. Those supervisors can use those trunked radios to communicate with other local disciplines or with neighboring or incoming responders.

Further, not everyone has to use a digital radio. Rank-and-file fire fighters still can operate with existing, low-wattage, analog radios and use those to communicate with each other and with their supervisors in the field while they're on an incident.

IM also has been advised that when local fire services have to call in support from outside their local areas, they can use the IM system to communicate with incoming resources all along their route, including areas where cellular phones are ineffective.

Advantages of IM at an Incident.

Fire incidents sometimes require the efforts of non-fire personnel. City police, county sheriff's deputies or Montana Highway Patrol officers may have to block streets or roads and establish detours. The Montana Department of Transportation may have to be involved if the incident is along a state or federal highway.



Ambulances or EMS workers may have to reach the scene and treat or transport injured people. Those vehicles may have to cross barricades established by fire-law enforcement cooperation. Resources from outside a fire district may have to be called to bring specific expertise to the scene. That expertise might be with hazardous materials or explosives. Those resources also may have to

cross barricades to reach the scene.

Limitations of Trunked Radios.

While IM believes there are advantages to trunked radios, we recognize there are limitations when it comes to fire incidents. Trunked channels and digital radios should not be used inside buildings, at least initially. The "vocoders" on digital radios do have some problems in those situations.

However, since IM advocates that only supervisory personnel have trunked radios for inter-discipline communications, fire fighters inside a building still can use existing analog radios to communicate with each other and their supervisors on an incident. This position is in line with the current position of the Phoenix Fire Department, a national leader in fire safety research.

The Phoenix Fire Department: No Longer an Opponent to All Trunking

Some Montana fire departments have been influenced by criticism of digital trunked radio systems by the Phoenix, Arizona Fire Department. Essentially, the Phoenix department delayed joining the city-wide trunked system solely because of concerns over fire fighter safety in "hazard zone incidents."



In fact, it was the only city department not to join a system that Phoenix had begun creating in the late 1990's.

Interoperability Montana and the Fire Community: WHAT'S IN IT FOR ME?

Today, the department's attitude toward trunking is quite different. Phoenix Fire has accepted the use of trunked radios for all non-hazard zone calls, including EMS calls and outdoor rescue operations that do not involve SCBA equipment or air support.

In fact, in early December, the department completed a transition to trunked 800MHz radios for all non-hazard zone responses. Phoenix Fire also is taking another look at how trunking

could be used for hazard zone responses. Options include using DVRS (Digital Vehicle Repeater System) technology or dual-band or multi-band portable radios. According to PFD leaders, the hardware for a DVRS solution is "right around the corner" and a department website states:

"This radio system will work very well for us for non-hazard zone incidents which are 80% of our call volume."

-Phoenix Fire Dept. "800 MHz" Website



"The Phoenix Fire Department has done extensive testing and has a solution that will render these radios safe to use in the hazard zone."

PFD officials stand behind that statement, although they emphasize that they are open to all potential solutions and will not start using trunked communications in the hazard zone until a solution is found and proven.

In December 2009, the department agreed to commission a fresh study on hazard zone communications, using the same communications consulting firm that helped them reach the solution for non-hazard calls. That study should be complete by the end of 2010.

Once its leaders made the distinction between non-hazard and hazard zone responses, Phoenix Fire began promoting the trunked system to the 20-plus jurisdictions that offer "automatic aid" to one another in the greater Phoenix area:

"The coverage of this trunked radio system is so good that you will be able to hear crews radio traffic from across town. Who cares you say? How about the fact that we have Rescues, BC's, and Special Ops trucks that regularly travel great distances to incidents all over the city. Now, these units will be able to monitor incidents without waiting to hear radio traffic until they are a few blocks away."

"Interoperability means we can do our jobs more effectively, safely and quicker for Mrs. Smith."

-Phoenix Fire Dept. Website

"Now with the interoperable radios we have become more effective in our ability to coordinate efforts with all local, state, federal and private entities using a single radio system instead of having to use 4 or 5 radios and personnel to do what one radio allows us to do. Interoperability means we can do our jobs more effectively, safely and quicker for Mrs. Smith."

To see the Phoenix "800MHz Trunked Radio Network" website, visit:

<http://www.phoenix.gov/fire/800.html>

(For more on the Phoenix story, see "Part III: A Conversation with Phoenix Fire Leaders" and Part V: Direct from Phoenix Fire: Frequently Asked Questions and Other Information.)

IM's Governance: Who We Are.

First of all, IM is **not** a state agency; we're a non-profit association of county and tribal governments who have banded together into planning and management consortia. IM was formed to better coordinate work around the state and have a mechanism outside state government to route money to local areas for construction.

It's worth repeating that most of the work on IM has been done by people on a largely volunteer basis—people with day jobs in law enforcement or other public safety fields who devote significant amounts of time and energy to this project with little or no reward. It's also worth noting that IM had no central office or paid staff until late in 2008.

Since then, executive director Kevin Bruski, and our project management staff have done great things. They overcame multiple challenges to get the Northern Tier project accepted. They have made progress in constructing or upgrading communications sites in southern and southwestern Montana. And they're undertaking the difficult work of finding the money to continue building the system and, once it's built, sustaining it.

As we stated in our outreach meetings, IM must work harder to increase the level of trust between our organization and local governments and disciplines. And we must do more to ensure an ongoing two-way dialogue. You need to know what we're planning and doing; we need to know your thoughts and opinions. We believe we've begun that dialogue with our outreach meetings. Now we must sustain it, even as we work to sustain the system itself.



On the New Sustainability Plan: We Hear You.

Fire departments aren't the only local entities concerned over the potential costs of sustaining the IM system. We heard from plenty of city and county governments about their strapped budgets. We also realize that fire departments and districts have even greater challenges when it comes to raising and spending money. We'll take those concerns into account when we write a new sustainability plan. Over the coming weeks and months, we'll take all of the comments we received on sustainability and craft a plan that will be as fair as possible to all disciplines and as affordable as we can make it.

Make no mistake, however. For local government to continue to have a strong measure of control over the growth and management of the system, local entities must make a contribution to IM's sustainability.

IM has enlisted a group of county leaders to help us design our plan and be advocates for it. When it's ready, we'll share our plan with you, solicit more comments, then get it ready to share with the legislature and Montana's Congressional delegation.

